

Behavioral and physiological responses to sensory-specific satiety

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To investigate responses of the autonomic nervous system (ANS) and facial expressions to sensory-specific satiety.

Ethical review	Approved WMO
Status	Recruitment stopped
Health condition type	Other condition
Study type	Interventional

Summary

ID

NL-OMON40918

Source

ToetsingOnline

Brief title

ANS in sensory-specific satiety

Condition

- Other condition
- Appetite and general nutritional disorders

Synonym

sensory specific satiety; eating behavior

Health condition

sensoriek en eetgedrag

Research involving

Human

Sponsors and support

Primary sponsor: Wageningen Universiteit

Source(s) of monetary or material Support: HAK industries, Wageningen Universiteit (opdrachtgever/verrichter van het onderzoek; werkgever). De 3e geldstroom sponsor (HAK industries) heeft geen invloed op de inhoud of details van de studie.

Intervention

Keyword: autonomic nervous system, eating behavior, facial expressions, sensory specific satiety

Outcome measures

Primary outcome

Physiological parameters include changes in instantaneous heart rate, electrodermal activity, skin temperature, and facial expressions as a result of sensory-specific satiety. Behavioral parameters include changes in liking, general and specific appetite, as a result of sensory-specific satiety.

Secondary outcome

Differences in physiological and behavioral measures, between the (sweet versus savory) eating conditions.

Study description

Background summary

Eating behavior is determined by many variables, including sensory processes that influence the selection of foods and determine meal size. As a food is consumed, its perceived pleasantness declines compared to that of other foods. This phenomenon, referred to as sensory-specific satiety, contributes to the termination of eating, along with other factors. Though this effect is well-established, implicit responses may be better suited to provide more insight in temporal development of sensory specific satiety and complementary information to the preference scores for the test stimuli presented before and after exposure.

Study objective

To investigate responses of the autonomic nervous system (ANS) and facial expressions to sensory-specific satiety.

Study design

The study design is a within-subject intervention experiment. All participants will visit four times, in which they will receive different meals (sweet, savory) leading to sensory-specific satiety. Before, during and after the meals, ANS responses, facial expressions and liking will be measured.

Intervention

various food products to be eaten ad libitum

Study burden and risks

Subjects will participate in four experimental sessions, each lasting between 45-60 minutes. Subjects will receive test meals and will be provided with sensors fitted to their chest and non-dominant hand. Experiences so far indicate that the sensors themselves are unlikely to cause discomfort. The risk associated with participation is negligible. There will be no current therapeutic/beneficial effects for the subjects.

Contacts

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Trial sites

Listed location countries

Netherlands

Eligibility criteria

Age

Adults (18-64 years)

Elderly (65 years and older)

Inclusion criteria

All women, aged 18-35 years that are apparently healthy, not allergic to any of the foods used in the experiment, with a normal BMI (18-25 kg/m²) are invited to participate in the study.

Exclusion criteria

following an energy-restricted diet during the last two months, gained or lost > 5 kg weight during the last year, not liking the products in the study, having a lack of appetite, smoking, not allergic or intolerant to any of the foods in the experiment, and being pregnant or breast feeding

Study design

Design

Study type:	Interventional
Intervention model:	Crossover
Allocation:	Randomized controlled trial
Masking:	Open (masking not used)
Control:	Active
Primary purpose:	Other

Recruitment

NL

Recruitment status:	Recruitment stopped
Start date (anticipated):	26-06-2014
Enrollment:	24
Type:	Actual

Ethics review

Approved WMO	
Date:	15-04-2014
Application type:	First submission
Review commission:	METC Wageningen Universiteit (Wageningen)

Study registrations

Followed up by the following (possibly more current) registration

No registrations found.

Other (possibly less up-to-date) registrations in this register

No registrations found.

In other registers

Register	ID
CCMO	NL48361.081.14